

REMARKS

Favorable reconsideration of this application, in light of the preceding amendments and following discussion, is respectfully requested.

Claims 1-55 are pending in this application. Claims 1 and 44 are amended. Claims 4, 7-15, 19-43 and 47-55 are withdrawn from consideration. No claims have been added or cancelled by this amendment.

Applicants note with appreciation the Examiner's indication that certified copies of all priority documents have been received by the USPTO and the Examiner's indication that all references filed in the Information Disclosure Statements have been considered.

Applicants respectfully note that the present Office Action does not indicate that the drawings have been accepted by the USPTO. Applicants respectfully request that the Examiner's next communication include an indication as to the acceptability of the filed drawings or as to any perceived deficiencies so that the Applicants may have a full and fair opportunity to submit appropriate amendments and/or corrections to the drawings.

Claim Rejections Under 35 U.S.C. § 103

Claims 1, 2, 16-18 and 44-46 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the Examiner indicated Applicant Admitted Prior Art (Fig. 1, pages 1-2) in view of Chang et al. (U.S. Patent No. 6,025,247, herein Chang). The Applicants respectfully traverse this rejection for the reasons detailed below.

Independent claim 1 is amended to recite, *inter alia*, "forming a plurality of bit lines on the first insulating layer, **each of the plurality of bit lines including at least one bit line layer**; forming an oxidation preventing layer over substantially the entire surface of the bit lines, **the**

oxidation preventing layer arranged to contact all of the at least one bit line layers.” The emphasized features are shown at least in an example embodiment of the present invention illustrated in FIG. 7. FIG. 7 illustrates that the oxidation preventing layer 50 contacts both bitline layers, *i.e.*, silicide layer 48 and the doped polysilicon layer 50 of the bit line.

In particular, Chang as illustrated in Fig. 3(g) describes forming a silicon nitride layer 315 on a bit line structure 313 and the silicon dioxide spacers 314 arranged adjacent to the bit line structure 313. However, silicon nitride layer 315 fails to contact the silicide layer 309 of the bit line structure 313.

Accordingly, Applicants respectfully submit that Chang fails to disclose, teach or suggest at least the above-emphasized features of amended independent claim 1 and the similar features of amended independent claim 44.

Further, Chang is directed to a method for manufacturing a capacitor structure of a dynamic memory cell having a high capacitance and a flat topography on a semiconductor device.¹

Applicants respectfully submit that Chang does not even recognize the problems described in the Applicants' specification with respect to conventional devices, much less a solution thereto. In particular, according to example embodiments of the present invention, bit lines may be prevented from being oxidized in the course of forming a dielectric layer, which may lower the conductivity of the bit lines.²

Further, the Office Action mailed March 15, 2006 on page 3, lines 17-22 merely states that “it would have been obvious to one having skill in the art at the time the invention was made

¹ Chang, Abstract.

² Applicants' specification, page 7, lines 7-11.

to form the oxidation preventing layer (nitride layer) over the entire surface of the bit lines and the first insulating layer; and the oxidation preventing layer remaining interposed between the contact hole and the bit lines as taught by Chang et al. into the process of Applicant Admitted Prior Art in order to use as an etching stop layer for protecting the bit lines.” The Office Action mailed March 15, 2006, however, does not present the necessary “convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references,” Ex parte Clapp 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985), and therefore, this rejection may not be properly maintained absent such reasoning.

Still further, Applicants respectfully submit that absent the use of impermissible hindsight reconstruction analysis, the claimed invention is not rendered obvious over the Examiner alleged Applicant Admitted Prior Art in view of Chang.

In light of the above, Applicants respectfully request that the rejection of claims 1, 2, 16-18 and 44-46 under 35 U.S.C. § 103(a) be withdrawn.

Claims 3, 5 and 6 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the Examiner alleged Applicant Admitted Prior Art in view of Chang as applied to claims 1 and 2 above, and further in view of Lu et al. (U.S. Patent No. 5, 595,928, herein Lu). Applicants respectfully traverse this rejection for the reasons detailed below.

Applicants respectfully submit that Lu fails to cure the deficiencies of Chang as described above with respect to amended independent claims 1 and 44.

Lu describes a silicon nitride layer 26 arranged on the gate electrode 16 and the sidewall spacers 22 adjacent to the side surfaces of the gate electrode 16. In Lu, the nitride layer 26 fails to contact the layer 16.

Accordingly, Applicants respectfully submit that Lu also fails to disclose, teach or suggest “forming an oxidation preventing layer over substantially the entire surface of the bit lines, the oxidation preventing layer arranged to contact all of the at least one bit line layers,” as recited in amended claim 1.

Therefore, Applicants respectfully submit that claims 3, 5 and 6 are allowable over the Examiner alleged Applicant Admitted Prior Art, Chang, and Lu, either alone or in any proper combination, for at least the same reasons as discussed above with respect to independent claims 1 and 44.

Therefore, Applicants respectfully request that the rejection of claims 3, 5 and 6 under 35 U.S.C. § 103(a) be withdrawn.

Withdrawn Claims

Applicants respectfully submit that amended independent claims 1 and 44 are generic to at least claims 2-18 and 45-49. Accordingly, if amended independent claims 1 and 44 are allowed, Applicants respectfully submit that at least withdrawn claims 4, 7-15 and 47-49 should be rejoined and allowed. Further, Applicants reserve the right to file one or more divisional applications directed to any claims that are not rejoined prior to allowance of this application.

CONCLUSION

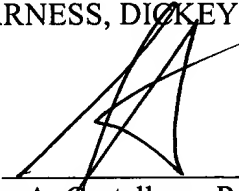
Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of the pending claims, which do not remain withdrawn, of the present application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John A. Castellano at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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By 
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